TENTAMEN INAUGURALE

DE

VACCINAE VERAE TESTIMONIIS.

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QUAM,

ANNUENTE SUMMO NUMINE,

EX AUCTORITATE REVERENDI ADMODUM VIRI,

D. GEORGII BAIRD, SS. T. P.

ACADEMIAE EDINBURGENAE PRAEFECTI;

NECNON

AMPLISSIMI SENATUS ACADEMICI CONSENSU, ET

NOBILISSIMAE FACULTATIS MEDICAE DECRETO;

Pro Gradu Doctoris,

SUMMISQUE IN MEDICINA HONORIBUS AC PRIVILEGIIS

RITE ET LEGITIME CONSEQUENDIS;

ERUDITORUM EXAMINI SUBJICIT

JOANNES GULIELMUS CALVERT,

ANGLUS;

COLL. REG. CHIRURG. LOND. SOC.

Calendis Augusti, horâ locoque solitis.

EDINBURGI:

EXCUDEBAT JOANNES MOIR.

1820.

VIRO SPECTATISSIMO,

EDVARDO JENNER, M. D. F. R. S.

S. P. D.

JOANNES GULIELMUS CALVERT.

ETSI AD TUA, VIR INCLYTE, MERITA PER TOTUM ORBEM TERRARUM JAMDUDUM VULGATA, ET IN SEROS NEPOTES TRANSITURA, EA, QUA PAR EST, LAUDE PROSEQUENDA MINIME VALEAM; TAMEN CUM BENIGNE CONCESSERIS UT HÆ PAGINÆ TUO NOMINE ORNATÆ IN PUBLICUM PRODIRENT, HANC OCCASIONEM GRATIAS PERSOLVENDI UT ARRIPIAM, SINAS.

VIRO EXIMIO,

JOANNI STORER, M.D. F.R.S.

S. P. D.

JOANNES GULIELMUS CALVERT.

CUM, VIR ORNATE, RES VACCINARIA NOTTINGHAMIÆ, SUB TUIS AUSPICIIS INSTITUTA, ADEO FELICITER PROCESSIT, UT NULLI IN CIVITATE HABERETUR SECUNDA; ET IBI, OBSERVATA IN HOC OPUSCULO EDITA PRIMUM FACTA FUERE, ID TIBI, ARTIS MEDICÆ DECORI, AMICITIÆ, QUA ME SEMPER DIGNATUS ES, HAUD IMMEMOR, DICATUM VELIM.

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VACCINAE VERAE TESTIMONIIS.

AUCTORE J. G. CALVERT.

Anno millesimo octingentesimo quinto, *Nottinghamiae* aedificium vaccinae apud pauperes gratis inserendae dicatum est, et in diario ibi servato aegri cujusque casus accurate notari solebat. Muneribus in hoc aedificio peragendis praefectus eram anno millesimo octingentesimo undecimo; ad quod usque tempus tribus millibus quadringentis ferme hominibus vaccina adhibita est, et adeo feliciter, ut in uno tantum exemplo spem frustrari fertur, et hoc minimè pro certo compertum videtur.

2. Antequam huic muneri obeundo praepositus eram, stipendia quosdam annos militiae merui, et cum ibi ars vaccinandi vix exerceri coepta erat, ea, qua par fuit diffidentiâ, ad nova munera suscipienda memet accinxi. Non ignarus eram quanti momenti esset rem omnem penitus pernoscere, et proinde ei memet studiose dedi; nec occasiones mihi defuere; per duorum triumve annorum spatium in hoc opere magnam temporis partem insumpsi; tandem deficiente pecunia publice in hunc finem collecta, et aliis de quibus dicere supervacuum est, beneficia ex hoc fonte derivata cessârunt, et a quibusdam gravibus experimentis desistere cogebar. Per id tempus tamen progressum aegrorum vaccina laborantium mille ducentorum et supra mihi investigare licebat; sed ut supra monui me in hac rei medicae provinciâ parum expertum fuisse, ad horum mille novissimum ex quibus, collatis rationibus, calculum institui, in hoc tentamine praecipue respiciam.

3. Attamen si quis secum reputaverit, quanti et quam celeberrimi medici de hac arte scripserunt, et simul animum adverterit ad valida argumenta quae illi protulerunt, ut, quam multis nominibus vaccinam variolae esse anteponendam, ostenderent, nec minus ad annos bene multos jam elapsos ex quo primum a Jennero inventa fuit, mirum ei videbitur tam pauca documenta, et ea parvi quidem momenti, iis ab Jennero ipso prolatis esse adjecta, et nil amplius effectum esse ut passim apud omnes recipiatur. Narrationes adeo multas et adeo inter se discrepantes, quas non solum hujus doctrinae inimici, verum etiam fautores ejus strenuissimi undique vulgabant, effectibus minus distincte notatis vel incondite permistis, potius huic rei tenebras obduxisse quam lumen attulisse, videtur.

4. Inter causas quae vaccinae progressui obstiterunt, licet observare, ex quo die primum Jenner prophylaxin contra variolam protulit, medicos varii nominis non defuisse, qui famam ejus obterere conati sunt, utcun-

que egregia sit virtus qua polleat arcendi atrocissimum malum, cui gens humana obnoxia est.

5. Non sane meum est scrutari causas, quae eos auctores impulerunt, ut talem agendi rationem inirent, etsi multa sese offerunt quae suspicionem nobis merito incutiunt.

6. Inter eos autem, qui primi strenuissime contra vaccinam contenderunt, recte numeretur Doctor WOODVILLE nuper medicus in Nosocomio ad Variolam Inoculandam Londini Instituto. Ille in schedis quas anno millesimo septingentesimo nonagesimo nono vulgavit, perhibet, ex ducentis ibi vaccina innoculatis majorem partem eruptione correptam esse, quae non solum specie variolam referebat, sed etiam et insitione et interventu aëris ad illam propagandam valuit; multos inde laborasse dicit; his insuper addit, unum circiter ex quingentis interiisse; ex quibus omnibus colligit, cum tantum unus ex sexcentis variola affectis moritur, hunc morbum non temere hominibus esse inferendum.

7. Documenta tamen, quae de his protulit, fallacissima esse fautores vaccinae luculenter ostenderunt, Doctor WOODVILLE ideo concessit variolam naturalem in exemplis antea dictis, quae eruptiones comitatae sunt, ex necessario supervenisse, cum in aedem ad vaccinam accipiendam recepti fuere. Sed quis medicus, qui unquam variolae naturalis centum viderit exempla, tantum numerum extitisse crederet, et ne unum quidem mortuum fuisse? Quinetiam si detur morbum fuisse variolam, utcunque susceptam, maximam horum partem leviter aegrotasse apparet. (*Vide Appendix* A.)

8. Lugendum est tamen, etsi in hac re communi hominum sensui Doctor WOODVILLE assensisse videatur, famam minime secundam jam de vaccina multorum animos occupasse, quae, quanquam omni fide destituta, ejus professione non erat delenda: summas ideo laudes ei collatas plurimum obfuisse quo minus vaccina valeret, crederem. (B.)

9. Doctor JOSEPHUS ADAMS nuper mortuus, qui subiit in locum medici supra memorati in eodem Nosocomio, inter eos vaccinae adversantes censeri debet. Idem paucis abhinc annis Tractatum in medium protulit, cui nomen inditum "A Popular View of Small-Pox," in quo speciem quandam albidam inserendam enixe commendavit. Haec, proinde ut ab illo descripta est, mihi videtur admodum cognata morbo, quem Doctor WOODVILLE in commentariis ejus supra dictis variolae et vaccinae virus simul miscendo se propagasse retulit, antequam materies brachio inserta fuerit. (c.)

10. Doctores MOSELEY* et ROWLEY† diversam inierunt rationem qua vaccinae merita minuerunt. Affirmant enim omnes vaccinâ affectos non solum variolae postea objectos esse, sed inde morbos, abnormes, et

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* Medicus Nosocomii Militaris apud Chelsea, et auctor libri cui nomen "Commentaries on the Lues Bovilla."

† Olim Medicus Nosocomii Sanctae Mariae la Bonne.

teterrimos contrahere; et insuper aegrum gradatim se isto bruto generi animantium assimulare, unde infectio originem traxit. Doctor ROWLEY simul perhibet artem inoculandi summum peritiae gradum jam attigisse, ita ut vix ac ne vix quidem ulla exempla darentur in quibus mortem attulit. (D.)

11. Multi alii minoris nominis haud minus sedulo sese dederunt, ut de justis vaccinae laudibus detraherent, et ad ejus progressum cohibendum male conspirârunt. Haec res tamen ad investigandum accuratius phoenomena et veram vaccinae naturam alios impulit, qua fit, ut tandem stabiliatur fundamento adeo certo, ut nulla sit evertenda arte.

12. Quo haec scientia ulterius provehatur hanc dissertationem suscepi.

13. Hanc esse rem summi momenti nemo vere neget, cum ex diversis calculis de hac re institutis constat, in Britannia quadraginta millia hominum fore servata quotannis,

si passim apud omnes usus ejus invalesceret. *

14. Hic vero tam ingens numerus, fortasse non tanti habendus est, quam mala quibus juvenilis aetas, et per variolae progressum, et post ejus decessum, obnoxia est; inter haec, caecitas, claudicatio, et id generis alia, parentis non minus quam medici attentionem sedulo vindicant.

15. Sin autem vaccina ea cura inseratur, quam summa rei necessitudo postulat, haec omnia mala effugere valemus, praesertim si his principiis administrata fuerit, quae multorum experientia consentiens maxime esse necessaria docuit.

16. Variae tamen opiniones hodie proferuntur de methodo vaccinam adhibendi maxime efficaci. Illam, quam Dominus Bryce protulit, omnes enixe commendârunt; sed difficultates quae *testimonii* ab eo

* Vide Pruen's Comparative Sketch, and Dr Monro on Small Pox after Vaccination.

propositi usum impediunt, praesertim apud eos qui medicinam privatim exercent, haud leviter obstant quo minus late obtineat. (E.)

17. Hoc *testimonium*, ut a Domino BRYCE adhibitum est, expertus sum, materiem scilicet ex vesicula recenti extractam iterum inserendo, sed propter causas mox dicendas tentamina quae institui exitus parum felices habuerunt.

18. Hanc alteram inoculationem simul cum prima, ad summum pervenire non semper comperi, haud raro quosdam dies posteriorem esse, et prima inoculatione non obstante, summum incrementum attingere; huic itaque *testimonio* parum fidendum. (F.)

19. Vaccinae pustulam plus semel non esse aperiendam, quo virus extrahatur, mihi persuasum est, hoc enim perniciosum duco, non solum quod pustulae progressui obstet, et ideo universo morbo; sed hoc nomine etiam, ne pustula adeo laesa ac turbata sit, ut ad pus gignendum prona fiat, quod se vi-

ro intermiscens, ista morbi specie, vulgo spuria nominata, et aegrum vaccina laborantem et alios eo infectos afficiat.

20. Methodus vaccinam inserendi quotidiano usui accommodata jamdiu desiderata fuit: quae scilicet commode a medicis exerceri queat, et simul prejudiciis aut agrorum aut parentum conveniat, quaeque summam vim prophylacticam contra variolam habeat, et simul *teste* quadam evidente vires ejus palam commonstret.

21 An methodus quam jam propositurus sum ad haec desideranda supplenda valeat, dies ulterior et experientia sola doceat.

22. Quoniam ad alios morbo rite imbuendos virus ex vesicula perfecta, scilicet die octavo vel nono detrahere necesse est, hoc tempore vaccinam non solum multo commodius iterum inseri, sed etiam inde certum, et minime fallax *testimonium* de impe-

rio quod exercet in corpus, deduci, usu edoctus sum.

23. In hoc *testimonio* adhibendo, cavendum est ne vesicula prius turbetur, quae integra exhibet virus translucidum, coloris expers, in cellulis exiguis detentum, quarum quaevis prius pungenda est, quam humor facile exudet. Si vero pustula laesa fuerit, quod nutrices et parentes plerumque negant, ex singula punctura copiosa materiei contentae effusio mox insecutura est, quae ex pure viroque simul commistis constare videtur.

24. Quae infra tradita sunt propria experientiâ comprobavi, et ea itaque usui medicorum commendare velim.

25. Ex mille exemplis quibus vaccina, et *testimonium*, ut supra, adhibita erant, centum septendecim iterum vaccinam experti sunt, et, exceptis viginti, pustularum progressus, antequam ad summum pervenisset, cessaverat, quae vero in crustas aut scabiem

abierunt, adeo ut illae manifeste *acmen* praeteriisse viderentur, cum aegri quinto decimo die ad Nosocomium adducti fuere. Non dubito quin horum numerus multo major fuisset, si genuinum ac purum virus non accurate selectum esset, quo usi sumus in vaccinam inserendo, ut postea docebimus.

26. Viginti exempla supra relata solitum habuerunt progressum, et pleraque eorum consuetam magnitudinem justo tempore adepta erant, octavo scilicet die *testimonii*, et quinto decimo inoculationis, sed pauca idem exigebant tempus ad crustam inducendam, quod prima insitione observatum est.

27. Vaccina quae in exemplis novissime memoratis tertio inserta erat, cum parentes id permiserant, et res postulare videbatur, varios dedit exitus, plerumque autem leves; in uno tamen exemplo pustula, haud secus ac prima et secunda, magnitudine adaucta est; plura instituere experimenta non concessum erat.

28. In multis centum septendecim exemplorum supra dictorum, infantes per insitionis progressum diversis morbis, diarrhoea nempe, dentitione, scarlatina, et aliis laborare constabat.

29. Pustulae eorum qui diarrhoeâ laborabant, adeo lente procedebant, ut, die quinto decimo, vice crustarum subnigrarum pustula perstitit, cuticula admodum tenui tecta, humore semitranslucido repleta, eminens, levissimo motu adeo facile turbanda, ut vix summa cura servari potuit. In his crustae colorem minus saturatum ut plurimum exhibent.

30. Si ex dentitione, scarlatina, aut rubeola aegri febricitaverint, praesertim a die octavo ad undecimum post vaccinam insertam, inflammatio, quae areolam vesiculae circumdatam efficit, per unum alterumve diem fortasse serius prodit, et tunc consueto more progredietur. In his exemplis supra dictis, *testimonium* plerumque procedit. (G.)

31. In centum septendecim exemplis supra traditis, multis contigit vaccinam per morbi progressum turbatam habere, et itaque, sub quacunque forma apparuerit, vix ei sine *testimonio* crederemus.

32. Ex tempore quo haec experimenta instituta fuere, jam quinque anni et amplius elapsi sunt, et quanquam per posteriorem ejus temporis partem variola late et sub specie maximè maligna increbuit, nullum aegrorum quos in tabularia mea retuli, variolam expertum esse credo, saltem nullus me de hac re unquam admonuit, quod certe fieret si res parum prospere cesserat.

33. Cum vero variolae insitio facta est, aegrum non securum existimamus, nisi, cum pustula in parte inoculata sese ostenderit, altera oriatur affectio, eruptio nempe, ex qua, si morbus antea aegrum non incolumem praestiterit, corpus iterum infici queat, haec inoculatio, secunda quasi vice peracta, qua variola supra vaccinam polleat, securitatem multo majorem pollicetur, nisi *testimonium*

jam dictum adhibeatur; nam si corpus eo tempore quo vaccina affici debet, alio morbo simul detentum sit, vel quodvis aliud vaccinae progressui obstiterit, abs re foret credere, eam statim et sub his conditionibus, aegrum ex impetu variolae tutum praestare potuisse.

34. Variolae redeuntis exempla mihi oblata sunt, post aeger morbi speciem graviorem expertus erat; in his casibus autem hunc secundum morbi impetum habitui cuidam corporis proprio potius referre velim, apud quem prophylaxis consueta ad corpus adversus variolam incolume praestandum, nil valet. In eadem familia variolam post vaccinam non semel erumpentem vidi. (H.)

35. Ægro ex causa forsan haud absimili, scarlatina tertio laboranti medicinam adhibui; huic quoque causae, exemplum vaccinae ter recurrentis supra memoratum, et pustulam justae magnitudinis exhibens, tribuendum esse puto.

36. Cum nobiscum reputemus quam parum scienter inoculationem esse institutam, negligentia aut incuria eorum qui ei administrandae praefecti sunt, tam paucos variola postea correptos mirum est, praesertim si concessum fuerit, pus ex pustula turbata detractum vaccinae genuinae gignendae parum aptum esse. Haec ita se habere, verisimile est ex eo quod, in legionibus quibusdam, et item pagis ubi complures vaccinam ex eodem fonte experti sunt, unusquisque horum postea variola laboravit, a solita tamen ejus norma nonnihil deflectente.

37. Hoc quoque fit manifestum, animum advertendo ad varias descriptiones quas auctores de vaccina spuria protulerunt. In his enim pustulam fuisse turbatam statim percepi, quae adeo saepe medico sese offert, semper detegenda tamen ex vestimentis aegri accurate investigatis, vel ex tabo subito et ubertim effuso ex pustula levissime puncta: Medico autem in hac re multum versato his auxiliis vix opus est.

38. Ut vaccina exitum felicem habeat, regulae sequentes rigide servandae sunt.

39. Virus caute ex vesicula vaccinae perfecta atque illaesa infantis bona valetudine fruentis, die circiter octavo detrahi debet, antequam inflammatio late circumfusa fuerit, et subter cuticulam insinuandum, vel, cuticula prius abrasa, ad corporis superficiem, variolam aut vaccinam nondum adhuc experti, admovendum est, et sequentia ut plurimum veniunt observanda.

40. Si die primo post virus brachio immissum, punctura inflammationis signa exhibeat; rem non bene processuram esse colligimus. Sin aliter inflammatio haud sese ante diem tertium ostenderit, eventum felicem expectare liceat; a die plerumque quinto vesicula in summa partis inflammatae conspici queat, latius semet diffundens donec areola aut inflammatio ad *acmen* pervenerit, quod undecimo vel duodecimo plerumque fit.

41. Genuina vaccinae vesicula, ex cellulis parvis, ut supra diximus, constat, et paulatim crassior facta, in crustam demum abit. Haec crusta fere jam inde a principio ortum habère videtur, nam in medio vesiculae parvum ab initio videre est punctum, quod vesisiculae progressum plerumque videtur prosequi, et circiter diem decimum quintum vel sextum crustam splendidam, subnigram, conum nonnihil referentem exhibet, cujus basis in cuticula ei circumfusa altius defixa est, et quae circiter diem vicesimum primum plerumque decidit, cicatrice relicta, in qua foveolae multae observandae sunt per vitam duraturae.

42. Ex specie elevata et conoidea hujus crustae docemur, etiam post spissescere coepit, virus adhuc infra progigni, quod, prout vesicula magnitudine adaugeatur, simulquoque concrescit, sed tempus morbi non adhuc bene definitum est, quo virus morbum propagandi vim amittat; basin tamen crustae aqua dilutam, et cutis superficiei abrasae admotam, ad vaccinam gignendam non valere

expertus sum, at crustae summa eodem modo tractata bene respondebat.

43. Virus ut supra monuimus, die octavo vel nono de vesicula desumi debet, cum ad morbum aliis communicandum, tum ad imperium, quod in totum corpis exerceat, probandum, quod fit, si altera insitio eodem ac prior modo facta fuerit, a prima tamen vesicula nonnihil remota. Si posterior inoculatio nullum dederit effectum, corpus morbo non amplius esse obnoxium statuere liceat, et ideo, quodcunque pustulae acciderit, rem probe esse effectam pro certo habeamus.

44. Haud me latet fieri posse, ut virus ultimo admotum non absorbeatur, sed hujus periculum perexiguum apparebit, si consideremus corpus ad morbum suscipiendum jam pronum existere; et, ex calculis caute subductis, vix unum e triginta morbum prima insitione evasisse comperi, modo virus recens ex vesicula detractum adhibitum fuerit. Doctor Fraser nos certiores fecit, ex trecentis et septem aegris, quos vaccina pri-

vatim inoculaverat, duos tantum morbum effugisse, sed de ratione inserendi, qua adeo feliciter usus est, nil dixit.

45. Si *testimonium* ad certum usque gradum processerit, sed non ultra, et crusta citius solito inducitur, vaccinationem optatum habuisse eventum certius docemur, quam si nulla pustula exorta fuerit.

46. Si tamen *testimonium* eundem ac in prima inoculatione, cursum tenuerit, sive tempus, sive magnitudinem ejus spectemus, res adhuc in dubio habenda est, donec altera inoculatio secundum principia jam proposita vires ejus doceat; casus autem ejusmodi raro eveniunt.

47. Si pustula, quae die octavo vel nono apparet, laesa fuerit, ei minime fidendum est. *Testimonium* ex matura alterius aegri vesicula fieri debet, si virus modo uni brachiorum ejus insertum fuerit, antequam eum esse incolumem praedicere liceat.

48. Ne quis autem hunc morbum frustra suscipiat, vaccinam in utrumque brachium insitione immittere melius foret; si hoc fit, rem bene eventuram multo probabilius erit; praesertim si una ex pustulis ad finem usque imperturbata processerit.

49. Ut virus seligatur ex aegro, vitiis cutis vel aliis morbis non implicito, summi momenti esse duco; rationes enim graves mihi sese obtulerunt quare crederem cutis morbos non infrequenter una cum vaccina communicari, cum parentes ipsi conati sunt aegrotos seligere e quibus virus desumeretur.

50. Etiamsi vaccinam inserui ex viro de vesicula vaccinae infantium febre ex variola concitata laborantium, eo ipso die quo eruptio manifesta erat, hi aegri in hoc statu vaccinae subjecti, hujus morbi speciem maxime genuinam experti sunt, nec ullae variolae pustulae prodierunt; etsi Doctoris WOODVILLE experimenta cum viro vaccinae et variolae simul commisto facta, duos morbos

simul inoculatos quandam in corpus posse exercere potestatem, plane declarant.

51. Virus quondam accepi ex quo vaccina sex infantes inoculavi, quorum quisque eruptione levi supra cutem die decimo vel undecimo affectus erat. Sed vix ullum exemplum, mihi sese obtulit, in quo eruptio ad vaccinam referri posset, modo mihimet virus seligendi facultas data erat.

52. In memoria autem tenendum est, infantes dentitione laborantes, vitiis cutis, praeter quae ex vaccina oriuntur saepe esse opportunos.

53. Prae caeteris, cutis vitium notandum est, quod tam saepe sese ostendit, adeo facile contagione vulgandum, et simul quod legitimis vaccinae effectibus adeo obstat, ut summa cura medici opus sit ad mala praecavenda, quae ex eo profluunt; Porriginem Doctoris WILLAN Favosam intellectum velim, quam pone aures plerumque subor-

tam matres nutricesque fovere, potius quam reprimere malunt; quippe quibus male persuasum est, humorem effusam secundae oculorum valetudini inservire. Hunc morbum pruritus adeo importunus comitatur, ut raro dentur exempla quibus vaccinae pustulae non damnum attulerit; in his etiam exemplis *testimonium* parum respondet, eandem quippe, cum prima pustula subiturum sortem; et itaque de morbi exitu incerti sumus.

54. Huic morbo alterum admodum affinem descripsit Doctor JENNER* quem tamen ad quandam eruptionis herpeticae ~~perpetuae~~ speciem relegavit, et itaque dubius haereo, an idem habendus sit, ac morbus de quo mentionem feci; hic, enim, plane contagiosus est, et ideo eruptionibus herpetecis dissimilis. Vaccinam spuriam ex hoc fonte crebro esse derivatam Doctor JENNER jure suspicatus est. Cum ille, tamen, concedit pustulam vaccinae veram simul cum spuria in eodem aegro

* Vide London Med. and Phys. Journal, Aug. 1804.

adesse posse, valde verisimile est injuriam veram esse habendam causam. Quo haec mala caveantur, Doctor JENNER admonet, ut, inter vaccinandum, vel paulo antea, unguentum picis, vel unguentum nitratis hydrargyri, paulo mitius factum, quod melius adhuc respondet, et subinde lotiones astringentes adhibeantur, quibus fit, ut hoc malum saepe tollatur, ita ut non amplius obstet, quo minus vaccina cursum rite teneat. Unguento hydrargyri praecipitati albi plerumque usus sum, quod simul mite et valde efficax in omnibus exemplis, etiamsi partes laesae admodum irritabiles fuere, satis conveniat.

55. Infantes vaccina laborantes mihi nonnunquam semet obtulerunt, quorum universum corpus plurimae crustae et ulcera deturpârunt, vaccinae pustulam scalpendo contracta, virus enim inde collectum per digitos ad caeteras corporis partes admoverunt, hoc tamen cito sine remediorum ope recedit, modo infantes cohibeantur, ne injuriam ulterius adaugeant. Haec tamen exempla vix fidem merentur, quoniam parentes morbi progres-

sum saepe male negligunt, etiamsi vaccina iterum adhibeatur.

56. Quod ad medendi rationem attinet, nonnunquam febricula urget eo tempore, quo areola semet diffundere coepit, cum haec autem raro ultra quadraginta octo horarum spatium perduret, de medendi ratione instituenda dicere supervacuum foret. Aliquando tamen, etsi raro, inflammatio circa vesiculam orta, eo usque intenditur, ut non solum gravem irritationem moveat, sed etiam de morbi eventu parentibus timorem incutiat. In hoc casu aqua frigida per pauca horae momenta, bis terque admota, ad hoc symptoma sublevandum satis valebit. Si vesicula serius puncta fuerit, et virus nimia copia effluxerit, sedulo ad idem remedium confugi, partim ut tabi affluxus cohibeatur, et partim ad materiem viscidam summovendam, quae aliter aegri linteis adhaerescens crustam vesiculae obductam sustulerit. Si demum pustula laesa fuerit, vel crusta sublata, ut scabiem de novo contraheret, optimum esse duco.

57. Vaccinae pustulam inoculando iterum

atque iterum concitare posse in iis, qui variolam vel vaccinam jam antea passi sunt, apud medicos passim invaluit sententia. In iis exemplis, apud milites recenter conscriptos et alios, cum suspicio exorta esset, an unquam horum alterutro morborum laboraverint, ubicunque de hac re periculum feci, me nunquam ad talem pustulam concitandam valuisse profiteor. Dominus JENNER, clari inventoris nepos, semet frustra quinquagies inoculavit, quinquagesima vero insitione levem partis affectionem concitavit, quam autem crederem ortam, ex eo quod pus cum viro commistum esset ab vesicula quodammodo laesa.

58. Hîc quaestio oritur, ad quam solvendam nequaquam valeo, exempla scilicet subinde mihi oblata sunt, in quibus nutrices et matres me certiorem fecerunt, se vix unquam quandam affectionem mammarum effugere potuisse, pustulis variolae haud absimilem, ubicunque infantibus variola graviter laborantibus lac praebuerunt.

59. Varicellam, praesertim eam speciem

quam pustularum eruptio comitatur, variolae varietatem esse habendam quibusdam persuasum est. Tanta certe inter hos morbos intercedit similitudo, ut mihi oblata est occasio videndi aegros, in quibus discrimine adeo levi a se mutuo distabant, ut etiam cum variola more epidemico graviter incubuerit, de morbi natura incertus haerebam. Unum imprimis exemplum mihi in mentem venit, in quo aeger per tres dies oculis captus esset. Morbum tamen, quo ille detentus fuit, varicellam esse habendam suspicatus, mense jam elapso, vaccinam inserendam curavi. Infans solitum vaccinae progressum expertus est, sed post aliquot menses foveolae bene multae manebant impressae. Alia et mitiora fuere exempla, in quibus hi morbi nullum imperium in se mutuo exercuerunt.

60. Quo melius discernere valeamus, utrum hi morbi ad idem genus pertineant, sequentem morbi historiam proferre liceat. Paucis hebdomadis antequam variola semet ostenderat apud *Nottingham*, cum jam per tres annos abfuerat, hunc morbum in familia apparuissse post vaccinae inoculationem, admoni-

tus sum. Mox memet ad aedes contuli; et ibi omnes infantes specie pustulosa varicellae esse detentos reperi, quorum unus vaccinam haud expertus fuerat. De natura morbi haud dubitans, ut minimus natu vaccina inficeretur, quam primum ex priore morbo convalesceret, auctor fui; ab hoc tamen mater familias, eventum vaccinae prioris parum felicem agerrime ferens, vehementer abhorrebat; hanc haud multo post revisi, sed hunc infantem variola, qua periit, fuisse tentatum inveni; caeteri tamen hujus morbi prorsus immunes fuere.

61. Utcunque autem cognati sunt hi morbi, quam parum conduceret rem ulterius prosequi, argumenta supra lata satis evincunt. Quicunque autem sedulo daret operam ut hi morbi accuratè a se mutuo internoscerentur, summas medicorum gratias reportare debet.

62. Ex antea dictis causis vaccinae minus feliciter procedentis, et ex iis nunc memoratis, de discrimine adeo difficili, quod inter variolam benignam, et varicellam pustulis

comitatam, obtineat, satis apparebit quam vana sint ea tentamina quibus numerum eorum, quos variola post vaccinam occupaverit, statuere conati sumus.

63. Omnes fere nunc consentiunt primam vaccinae originem ex equo esse derivandam. Anno millesimo octingentesimo decimo tertio virus mihi delatum fuit ex manu juvenis apud *Litchfield* depromptum, qui dum curabat calces equi vitiatas, morbum contraxerat. Periculo facto, id omnes dotes viri vaccinae genuinae praestare comperi; aeque leniter incedebat morbus, et simul eadem virtute contra variolam pollebat, ut *testimonium* adhibitum docuit; huic tamen, cum ille ex quo virus accepi, et cui mea experimenta accuratè tradita fuere, me de hujus aegri statu certius commonere recusavit, insistere nollem; et ad ea potius referre velim, quae de hac re CHRISTOPHER PEGGE, Eques,* Dominus RING† et Doctor LOY tradiderunt. Quae illi protulerunt, vaccinae originem ultra dubium ponunt; et porro experimenta a Doctore LOY instituta fortiter

* Vide, Lond. Med. and Phys. Journ. Vol. IV.

† Ibid. XVI.

nos adducunt, ut credamus, aegrum, in quo vaccina proprios effectus ediderit, morbo etiam locali ex variola inoculata non amplius esse obnoxium; et contra, etsi morbus totius corporis non solum manifestus, sed etiam gravis fuerit, non inde colligendum est vaccinam, eos effectus, quibus corpus contra variolae impetum tueatur, praestitisse. (I.)

64. Ex iis, quae supra memoravimus, liquido constat, vaccinam rite institutam valere ad omnia ea praestanda quae partroni ejus strenuissimi de ejus virtutibus praedicare ausi sunt; et etsi exempla subinde sese offerunt in quibus spem frustretur, hoc haud minus verum est de variola ipsa, quae eundem aegrum plus vice simplice nonnunquam petit; ad hujusmodi tamen argumenta confugere necesse non habemus, nam paucis tantum exemplis supra memoratis exceptis, ex iis quae supra retuli, haud mirum erit cur casus hujusmodi multo saepius, quam re vera fit, in conspectum veniant, etsi nullum maneat dubium de iis vaccinae virtutibus quibus corpus contra variolae impetum tutum praestet.

APPENDIX.

A.

(7.) PRAETER quod hic morbus natura mitissimus sit, haec insuper a Doctore WOODVILLE prolata attentionem merentur. 'At the request of Dr JENNER, I transmitted to him, in 'Gloucestershire, some of the Cow-pox matter, from the 'patients then under my care, which he used for the 'purpose of inoculation: After a trial of it, he informed 'me, that "the rise, progress, and termination of the "pustule, created by this virus on the arm, was exactly "that of the true uncontaminated Cow-pox." 'The 'matter sent was taken from the arm of Ann Bumpus, 'who had 310 pustules, all of which supurated; yet 'with the matter of this stock, Dr JENNER inoculat-'ed 20, and another gentleman, in the same county, 140 'persons, without producing any pustules which matur-'ated. This fact would appear to confirm an opinion 'entertained by Dr JENNER. In his second publication 'on the variolae vaccinae he seems disposed to attribute 'the pustules which so often attended this disease in 'London and it's vicinity, to some peculiar influence of 'the town air. But of the cases which I have stated,

'several were those of patients who were inoculated eight 'miles distance from London: yet these patients, in the 'proportion of about one in five, had an eruption. And 'at a small village, still farther from London, eighteen 'persons were inoculated with similar matter, in all of 'whom it produced pustules.'—Vide Dr WOODVILLE's Reports, p. 140.

B.

(8.) In relationibus quas anno millesimo octingentesimo tertio hi ad vaccinam promovendam constituti evulgârunt, de Doctore WOODVILLE hisce verbis mentionem fecerunt. 'It would be unjust, and indeed ungrateful, to omit 'acknowledging that the vaccine inoculation had been 'carried on uninterruptedly with great zeal at the Small-'Pox Hospital, from the January, 1799, preceding, where, 'by this time, above 2000 persons had been inoculated. 'On this occasion, the conduct of the Physician to that 'hospital, in sacrificing his ease and interest to intro-'duce the cow-pock inoculation, in opposition to the pre-'judices of a great part of the public, and at the risk of 'the displeasure of the Governors, ought to secure to his 'name eternal honour, and the gratitude of the whole 'human race." * Haec quae sequuntur anno millesimo octingentesimo quinto a Doctore HENRICO FRASER edita, amico simul et discipulo Doctoris WOODVILLE, de meritis ejus supra relatis haud leviter detrahere videntur, quocunque animo ab illo scripta fuerint. " *The Gover-*

* Vide Report of the Vaccine Pox Institution, 1803, p. 7.

" *nors of these Hospitals*," (Small-pox and Inoculation Hospitals,) "*far from opposing the practice of Vaccination,* " *have, from its earliest introduction, not only countenanced* " *it, but assiduously endeavoured to promote its prevalence,* " and to this moment are equally zealous in their efforts " to diffuse an universal knowledge of its importance. " As a proof of this, their late amiable Physician, the " loss of whom to these hospitals is irreparable, was, at " the time this inoculation was first introduced here, *in* " *the annual receipt of one thousand guineas* from his firmly " established and well merited eminence in the treatment " of small-pox, but no sooner was there a prospect of " diminishing the sufferings of his fellow creatures, than " he immediately at all risks turned his attention to the " proposal, and no man has done more towards support- " ing, modifying, and establishing vaccine inoculation " than he did." * " Some time ago I resisted the solicita- " tions of many of my medical friends, who wished me " to publish the result of my experience on this impor- " tant subject, under the influence of a decided deter- " mination never to enter the lists as a controvertist, un- " less the name and justly merited reputation of my late " sincere and much lamented friend and tutor Dr Wood- " vile, should be either directly, or insiduously attacked. " Under such circumstances however, I was prepared to " advance to the contest with all the courage of Diomede, " aided by all the caution of Ulysses. I would have " thundered into the ears of envy with the voice of con-

* Vide Observations on Vaccine Inoculation by Dr H. Fraser, p. 32.

" viction founded upon experiment and truth, and drown-" ed the lispings of calumny in the whirlpool of confusion. " Fortunately such exertions have not hitherto been re-" quired of me, and it is my most fervent prayer that " they never may." *

C.

(9.) " Twenty-eight patients were on the same day " inoculated with the matter of cow-pox, and that of " the small-pox, mixed together in equal quantities, in " order to try which would prevail, or if it were pos-" sible to produce a hybrid disease by a union of both. " The result was, that in more than one-half of the pa-" tients thus inoculated, the local affection distinctly as-" sumed the characters of the cow-pox; in the others " it more resembled the small-pox, but in none of them " was there much indisposition, or many pustules." †

D.

(10.) Doctor ROWLEY adeo feliciter describit eos, qui, quasi numine perflati, hanc rem intemperate prosecuti sunt, et verba ejus adeo perspicue eum ipsum pingunt, ut vix me contineo quin ea proferam. " When infatuation, " intemperate zeal, or wild enthusiasm seize the human " mind, clear perceptions, true reasoning, and solid judg-" ment vanish, or are suspended, and the wild effusions of " an unbridled fancy, when men least think it, often reign

* Vide Observations on Vaccine Inoculation by Dr H. FRASER, p. 5.

† Vide Dr WOODVILE's Reports, p. 140.

" with imperial sway. Man is little short of insanity, " whilst the raging fury may continue *." Haec insuper addit, " Whoever had not taken the oaths of supremacy " and allegiance to vaccination, or who dared to doubt " the infallibility of cow-pox inoculation even in its in- " fancy, even before any judgment could be formed, " were ignominiously treated as traitors to the royal vac- " cinating state, as rebellious subjects to the Jennerian " despotic power. Threats and tyranny chaced away all " placid investigation. Their empire was to be univer- " sal, and they endeavoured to crush to atoms every " wretched cool observer, or reasoner, who dared to exa- " mine their novel and suppositious infallible doctrines. " Earth trembled! and heaven profusely shed tears at " the wretched, servile, unhappy state of man! Reason " was trampled on, and chimera rode in a triumphal " car surrounded by parasites. Justice seemed para- " lysed with astonishment †." " Let mankind arouse " from their vaccinating lethargy, and chace from their " houses all who propose vaccination instead of salutary " small-pox inoculation ‡." " Indeed, no other ques- " tions are admissible in vaccination than, Have the " parties been inoculated for the cow-pox? Have they " been vaccinated? Yes. Have they had the small- " pox afterwards? Yes. As to how, when, where, whe- " ther the cow-pox took, was genuine or spurious, or

* Vide Dr Rowley on Cow-pox Inoculation, page 2.

† Ibid. page 27.

‡ Ibid. page 72.

"any arguments, however specious, as pretexts for "doubt or failure, they are evasive and irrelative to the "question *." Adeo inter se mutuo repugnant hi qui contra vaccinam contendere ausi sunt.

E.

(16.) In tractatu suo de variola post vaccinam haec dicit Doctor Monro. "It has been stated to me by se-"veral surgeons in the country, that they do not adopt "Mr Bryce's test, on account of the difficulty of pro-"curing vaccine lymph, and also owing to the great dis-"tances of patients from each other. But the second "inoculation may be performed with lymph taken from "the first inoculation; and it surely would be well to "visit the patient more than once, in order to deter-"mine whether the vaccination has run its regular "course. To the neglect of this precaution, many of "the failures are to be attributed †."

F.

(17.) Testimonia a Dominis Bryce et Pearson prolata, cum adhuc rudis esset vaccinae scientia, in eo quod attinet ad modum operandi, et ad tempus quo institui debet, vix a se mutuo discrepant; sed ex horum diverso exitu, diversae conclusiones ortae sunt. Etsi plures in sententiam Domini Bryce iverunt, argumentis a Domino Pearson prolatis potius accederem, et ei tantum dissen-

* Vide Dr Rowley on Cow-pox, p. 52.

† Vide Dr Monro on Small-pox after Vaccination, page 114.

tio quod ad tempus attinet, quo felicius institui queat, et hoc summi momenti esse habeo. Doctor FRASER de *testimoniis* verba habens haec dicit. " It appears to us, " that the justly celebrated Mr JOHN PEARSON was the " first, who made such an experiment, which he discon- " tinued, in compliance with the wishes of some eminent " vaccinators, who unreasonably suggested, that it might " prove inimical to the establishment of the practice; " and because, like a true philanthropist, he was unwill- " ing to offer any impediment to the progress of so be- " neficial a discovery. The method is simply as follows: " Inoculate the patient with fresh vaccine matter, and " on the sixth or seventh day re-inoculate him or her " with other matter, so that there may be an interval of " four days between the performance of the second ino- " culation and the completion of the first; and if the " case be secure, the second inoculation will disappear " as soon as the first attains its acmé ; while, on the other " hand, if the first be inefficient, the second will go re- " gularly through the whole progress of the disease *." Si tamen verba Dom. PEARSON et BRYCE sic intelligenda sunt, ut virus ex alio fonte sit petendum vel ex eodem fonte per plures dies jam spissescens, his utrisque aeque ac vesiculae maturius justo punctae objicerem, nam si virus ex alio fonte petendum est, plures aegros in promptu habere necesse est, quod si omnino fieri potuit, plurimum incommodi secum afferat, praesertim apud eos qui medicinam privatim exercent ; ad alios necnon morbos

* Vide Dr FRASER's Observations on Vaccination, page 24.

progandos haud leviter conduceret, vel saltem de hac re parentes perterreret. Viro jam concreto ex eodem fonte cum prima inoculatione petito aeque objici potest, hoc enim effectu debito saepe caruisset, et itaque nullum *testimonium* praeberet.

G.

(30.) Doctor Jenner duo protulit exempla notatu digna in quibus scarlatina duas adolescentulas octavo post vaccinam insertam die adorta est; quantum motus febriles diversi sibi mutuo obstent, clare demonstrant. In uno horum eruptio nono die apparuit, et morbus solito more cursum absolvit, "There was no apparent deviation in "the ordinary progress of the pustule to a state of ma-"turity, from what we see in general; yet there was a "total suspension of the *areola* or florid discoloration "around it, until the *scarlatina* had retired from the con-"stitution. As soon as the patient was freed from this "disease, this appearance advanced in the usual way." "The case of Miss H. R——, is not less interesting "than that of her sister above related. She was exposed "to the contagion of the *scarlatina* at the same time, and "sickened almost at the same hour. The symptoms con-"tinued severe about twelve hours, when the scarlatine "rash shewed itself faintly upon her face, and partly "upon her neck. After remaining two or three hours "it suddenly disappeared, and she became perfectly free "from any complaint. My surprise at this sudden tran-"sition from extreme sickness to health, in great mea-"sure ceased when I observed that the inoculated pus-

" tule had occasioned, in this case, the common effloresc" cent appearance around it, and that as it approached " the centre it was nearly in an erysipelatous state. But " the most remarkable part of this history, is, that on the " fourth day afterwards, as soon as the efflorescence be" gan to die away on the arm, and the pustule to dry up, " the *scarlatina* again appeared, her throat became sore, " the rash spread all over her. She went fairly through " the disease, with its common symptoms *." Haec exempla attentione adhuc digniora extitissent, modo vaccina secundo adhibita fuerit. Si, pro febre definitum curriculum tenente, alia, incerto tempore manens, ex dentione vel irritatione quavis concitata fuerit, in hoc rerum statu, quem affectum vaccina in corpus ederet, interrogare velim?

H.

(34.) Haec ex literis a Domino Christian apud *Liverpool* ad Doctorem Monro missis excerpta, in quibus ad quaestionem nonam, respondetur, mentionem faciunt de familia ad quam servandum contra variolam videtur nullam extitisse prophylaxin. " It has occurred to me " to have known of two fatal cases of small-pox suc" ceeding vaccination; but I did not see either case in " the progress of the latter disease; but, from the infor" mation I was enabled to collect, the disease was of the " confluent kind. One case was vaccinated by myself, " and the other by a colleague in one of the public cha-

* Vide Dr Jenner's Inquiry, Second Edition, p. 170.

" rities to which I belonged, and was registered in the " book as having gone regularly through the disease. It " is remarkable that another child in the same family " died under the same circumstances and at the same " time, who was vaccinated at a distant period by ano-" ther person; and that a third child in the same family " also had the small-pox, who was vaccinated at the " same time as the second. This is not a solitary in-" stance that has come to my knowledge of a family of " three or four children who have been vaccinated at " different periods of life, and by different practitioners, " being afterwards affected by the small-pox." *

I.

(63.) CHRISTOPHER PEGGE, Eques, nos docet morbum apud equos existere, qui ab illo *grease* dicto plurimum dissidet, cum quo tamen confundi solet; veterinarii illum *scratchy heel* appellant, et ille insuper addit, auctoritate Domini LUPTON, chirurgi, apud *Thame* fretus, materiam ex equo derivatam quibusdam immissam, morbum ex omni parte vaccinam referentem in illis progenuisse, et hoc virus ad morbum in vacca gignendum valuisse et inde ad alios translatum.† De hac re Dominus RING multa documenta utilia protulit.‡ Doctor LOY, materia *grease* dicta recte ex calcibus equi parata, vel vaccae vel corpori humano vaccinam insitione immittere se iterum iterumque frustra conatum esse affirmat. " At length,

* Vide Dr MONRO on the Small-pox after Vaccination, p. 105.

† Lond. Med. and Phys. Journ, Vol. IV. ‡ Ibid. Vol. XVI.

" however, I had the good fortune to meet with one " horse from whose heels I procured the matter of grease " in a more limpid state than that obtained from any of " the others, at about the fourteenth day of the disease " and a week from the first appearance of the discharge. " The matter from this horse produced the disease in " Experiments IV. and VI. and also in three cows whose " cases I have not particularised, as the appearances " were similar to Experiment IV. and as no further trials " were made from them."

" EXPERIMENT IV.

" Some of the thin limpid matter that issued from a " sore in the heel of a horse affected with the grease, " was inserted, by a perfectly clean lancet, immediately " after its being procured, into the teat of a cow. On " the fifth day the wound appeared rather elevated, and " a faintish redness surrounded it. In a few days a ve- " sicle formed, containing a large quantity of watery " fluid, and of a purple tinge. Though the inoculated " part was tumified and painful, the animal did not seem " otherwise diseased."

" EXPERIMENT V.

" A quantity of the limpid matter, obtained from the " teat of this cow, was inserted into the arm of a child. " On the third and fourth days the incision appeared " without any evident signs of having received the in- " fection; but on the sixth day a considerable degree " of redness surrounded the wound, and a vesicle was

" formed on the ninth day, when the child was inoculat-
" with the small-pox virus in three different places, and
" in such a manner that there could not be the least
" doubt of communicating the infection, was the consti-
" tution capable of receiving it. The child, however,
" continued free from any topical or general symptoms
" of the small-pox."

Experiment VI.

" Some grease-matter, obtained from the same horse,
" was inserted in the arm of a child. On the third day
" a small degree of inflammation surrounded the wound;
" on the fourth the inoculated place was much elevated,
" and a vesicle, of a purple colour, was formed on the
" fifth day; on the sixth and seventh the vesicle increas-
" ed, and the inflammation extended and became of a
" deeper colour; on the same day a chilliness came on,
" attended with nausea and some vomiting. These were
" soon succeeded by increased heat, pain in the head,
" and a frequency of breathing; the pulse was very fre-
" quent, and the tongue was covered with a white crust.
" When in bed the child was much disposed to sweat.
" By the use of some medicines, and exposure to cool
" air, the feverish symptoms soon abated, and disap-
" peared on the ninth day. On the sixth day small-pox
" matter was inserted into the same arm in which the
" matter of grease had been placed, but at a consider-
" able distance from it. On the fourth and fifth days of
" the small-pox inoculation some redness appeared about
" the wound, and on the sixth a small vesicle. The in-

" flammation now decreased, and on the ninth day the " vesicle was converted into a scab."

Experiment VIII.

" On the sixth day of the grease inoculation, and pre- " vious to the insertion of the small-pox virus, matter " was procured from this child, and five others were in- " oculated with it. From the remoteness of their situa- " tion, I had not an opportunity of seeing them till the " tenth day of the inoculation ; on that day an exten- " sive erysipelatous efflorescence surrounded the vesi- " cles, which were now beginning to dry, but still con- " tained a considerable quantity of limpid matter. On " the tenth day they were all inoculated for the small- " pox in the arms free from the former inoculation. No- " thing appeared from the insertion of the variolous mat- " ter except a very small degree of inflammation, which " vanished on the fifth day." Hunc morbum, ut semet in equo exhibet sic describit, Doctor Loy. " The horses " that communicated the infection to their dressers were " affected with a general as well as a topical disease. " The animals, at the commencement of their disease, " were evidently in a feverish state, from which they " were relieved as soon as the complaint appeared at " their heels, and an eruption upon the skin. The horse, " too, from whom the infectious matter was procured for " inoculation, had a considerable indisposition previous " to the disease at his heels, which was attended, as in " the others, with an eruption over the greatest part of " his body ; but those that did not communicate the dis-

" ease at all, had a local affection only."* Haec experimenta rem valde firmant; nec satis mirari possumus ingenium quo Doctor JENNER experimenta instituebat sua, et felices quos habuere exitus.

* Vide Dr LOY's Experiments on the origin of Cow-pox.

FINIS.